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Hiroichi Ukei

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SUGHRUE-265550
2100 PENNSYLVANIA AVE. NW
WASHINGTON, DC 20037-3213

EXAMINER

DESAI, ANISH P

ART UNIT

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

DETAILED ACTION

1. Applicant's arguments in response to the Office action mailed on 01/23/08 have been fully considered.
2. Claims 1, 2, and 5-9 are pending. Claims 3 and 4 are cancelled.
3. All of the previously made 35 USC Section 112-first paragraph objection to specification and rejection to claims are withdrawn in view of Applicant's response. However, upon further consideration a new objection to the specification is made.
4. The 35 USC Section 103(a) rejections based on based on Ludwig (US 3,088,848) in view of Ishikawa et al. (US 5,212,011) and Razmic (US 3,090,770) are withdrawn, because none of the aforementioned references disclose inorganic filler as required by presently amended claim. However, upon further consideration a new 35 USC Section 103(a) rejection based on Ludwig (US 3,088,848) in view of Ishikawa et al. (US 5,212,011) and Lee (US 5,428,093) is made.

Specification

5. The disclosure is objected to because of the following reasons: it is noted that the specification recites "Incidentally, as the high-density polyethylene are preferable ones having a density of from 0.940 g/cm³ to 0.970 g/cm³, and are especially preferably ones having a density of from 0.950 g/cm³ to 0.965 g/cm³. On the other had, as the low-density polyethylene are preferably ones having a density of from 0.880 g/cm³ to 0.930 g/cm³, and are especially preferable ones having a density of from 0.910 g/cm³ to 0.929 g/cm³." (See 0039 of the PG PUB of the presently claimed invention).
6. Example 2 of Table 1 of the Applicant's invention discloses a blend of 70% LDPE1 (density 0.919 g/cm³) and 30% HDPE1 (0.964 g/cm³) with no filler added to the

blend. The densities of LDPE and HDPE in the example 2 are within the range as that of disclosed by Applicant (0039 of the PG PUB of the presently claimed invention). The adhesive tape of this example is completely satisfactory in terms of properties of maximum stress at elongation, stress at break, and elongation at break (see Table 3). However, Comparative Examples 1, 3, and 5, all use same weight% of LDPE and HDPE as that of Example 2. Additionally, the densities of LDPE and HDPE used in the aforementioned Comparative Examples are within the range that is disclosed by Applicant (see paragraph 0039 of the PG PUB of the presently claimed invention). Further, a filler is not added in the blend disclosed in the aforementioned Comparative Examples. But as seen from Table 4, the results (e.g. maximum stress at break) of the aforementioned comparative examples are inadequate. For example, the maximum stress at break for comparative example 2 is smaller than the stress at break (see Table 4). Therefore, there is contradiction in the specification. Given Applicant's teachings in the specification for suitable densities of the polymers, Comparative Examples 1, 3, and 5 should have acceptable result. That they do not indicates that undue experimentation is necessary to determine what the invention actually is, what parameters are unaccounted for that result in the inadequacies of the comparative examples and what features are actually responsible for the success of certain embodiments of the invention. The inventor's lack of guidance in this issue contributes to the need for undue experimentation.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1, 2, and 5-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ludwig (US 3,088,848) in view of Ishikawa et al. (US 5,212,011) and Lee (US 5,428,093).

8. Ludwig discloses a pressure-sensitive adhesive (PSA) tape comprising a film (supporting substrate) comprising a blend of high density and low density polyethylenes (see Figure). Further, Ludwig discloses that "It is to be understood that various embodiments can be made in the invention described herein. Thus, materials normally added to conventional polyethylene, as known in the art, can be compounded with the blends of high and low density polyethylenes to obtain desired modification attributable to these materials. **If desired, filler materials and dyes or pigments may be incorporated as desired.**" (column 6 lines 47-60). Further, Ludwig discloses that "Low density polyethylenes generally exhibits a melting point...has an average density of about 0.92...carbon chain." (column 1 lines 42-45). It is noted that Ludwig discloses blend with varying amounts of HDPE (note balance being LDPE) (see Table 1, column 2 lines 35-40, column 4 lines 50-54), which reads on Applicant's weight% ratio of HDPE to LDPE in the range of 10/90 to 90/10. Further, as to the density of HDPE, Ludwig discloses that "The melting point of high density polyethylene...It had an average density greater than 0.92, the density ordinarily ranging from about 0.95 to about 0.98...state." (column 1 lines 46-50 and claim 1).

9. Ludwig is silent with respect to teaching the supporting substrate having an uneven portion on one side, the maximum stress at elongation of not more than 50% of the PSA tape is larger than the stress at break, wherein the elongation at break of the PSA tape is from 100 to 300%, the amount of filler is not more than 5 parts by weight based on 100 parts by weight of the resin composition, and the maximum stress at an elongation equal to or less than 50% is at least 11 N/10mm. However, Ishikawa discloses an adhesive tape which is low in cost and the properties of which such as unwindability, adhesiveness, trimmed clearance, printability, transparency and longitudinal tearing strength are improved without spoiling lateral hand cutting characteristics (abstract). The adhesive tape of Ishikawa is formed of a polyolefin resin base film and an uneven surface is formed on the other side thereof (abstract). It is noted that the film of Ludwig is formed of polyolefin based resins. It would have been obvious to one having ordinary skill in the art at the time the invention was made to create the uneven surface as taught by Ishikawa in the invention of Ludwig, motivated by the desire to obtain an adhesive tape having improved properties of adhesiveness and printability.

10. Ludwig as modified by Ishikawa is silent with respect to teaching the inorganic filler in the amount as presently claimed. However, Lee discloses a polyethylene blend composition comprising LDPE and HDPE (abstract), wherein the PE blend is formed into films (column 3 lines 5-15). Additionally, the PE composition of Lee is blended with a compatibilizer which is a combination of zinc oxide (equated to filler) and glycerol monostearate, wherein the zinc oxide is blended in the amount of 0.1 to 1.5% by weight (column 3 lines 20-35). Additionally, Lee discloses "It was surprisingly found that the

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combination of zinc oxide and glycerol monostearate gave a smoother product and a film having a better tensile strength and elongation than when either was used alone.”

(column 3 lines 35-42).

11. It is noted that the primary reference of Ludwig discloses a blended composition comprising HDPE and LDPE that is formed into a film for pressure sensitive adhesive tapes. Further, Ludwig discloses that if desired, filler material can be added to the films of his/her invention (column 6 lines 54-55). The reference of Lee also discloses a blended composition comprising LDPE and HDPE, wherein the composition of Lee is extruded into films. Additionally, the blended PE composition of Lee includes a compatibilizer that is a combination of zinc oxide and glycerol monostearate. Further the compatibilizer of Lee provides films having better tensile strength and elongation (column 3 lines 39-40). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to add the compatibilizer of Lee comprising zinc oxide (filler) and glycerol monostearate in the amount taught by Lee in the invention of Ludwig, motivated by the desire to form PSA film backings having better tensile strength and elongation properties.

12. Ludwig as modified by Ishikawa and Lee discloses claimed invention except for the properties of the maximum stress at elongation of not more than 50% of the PSA tape is larger than the stress at break, wherein the elongation at break of the PSA tape is from 100 to 300%, and the maximum stress at an elongation equal to or less than 50% is at least 11 N/10mm. It is reasonable to presume that said properties are present in the PSA tapes of Ludwig as modified by Ishikawa and Lee, because the PSA tapes of Ludwig as modified by Ishikawa and Lee, and that of Applicant comprise supporting

substrate having a PSA layer formed on one side of the substrate, the supporting substrate having an uneven portion on one side. Further, the PSA tapes of Ludwig as modified by Ishikawa and Lee, and that of Applicant comprise substrate formed of HDPE and LDPE wherein LDPE has density equal to or less than 0.919 g/cm^3 and the ratio of HDPE to LDPE is as claimed in claim 1; wherein the filler in the amount of not more than 5 parts by weight based on 100 parts by weight of the resin composition is added to the substrate. Therefore, the PSA tapes of Ludwig as modified by Ishikawa and Lee, and that of Applicant are structurally and compositionally equivalent. Hence, the presently claimed properties would have been present. The burden is shifted to Applicant to prove it otherwise (see *In re Fitzgerald*, 205 USPQ 594).

Response to Arguments

13. Applicant's arguments received on 05/23/08 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

14. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

15. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANISH DESAI whose telephone number is (571)272-6467. The examiner can normally be reached on Monday-Friday, 8:00AM-4:30PM.

17. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Larry Tarazano can be reached on 571-272-1515. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

18. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/A. D./
Examiner, Art Unit 1794

/Hai Vo/
Primary Examiner, Art Unit 1794